



# TELECOMMUNICATIONS SECURITY ADVISORY

from the  
Headquarters Engineering Services Team  
U.S. Department of Energy

95-01

**SUBJECT: CONNECTING TO INTERNET**

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Recently, the Engineering Services Team has been involved in the review of new systems that use the Internet as their transmission tool. This again brought to mind the many reports regarding the vulnerabilities associated with the use of systems connected to the Internet. Numerous publications and trade papers, as well as our own Computer Incident Advisory Capability (CIAC) bulletins, have provided much information about this. Because many new applications are being planned or developed, I thought it important to stress caution and reemphasize that connecting to the Internet or other networks introduces considerable risks.

Your computer systems may be secure, but connections from others may be less secure. One popular method for protecting systems is to employ "firewall" technology. "Firewalls" can provide an effective first line of defense against unauthorized access when managed properly. "Firewalls" are one of the tools available to minimize the risk associated with connecting to the Internet; *however, they are no substitute for effective security at the system level!*

If a computer connected to a network also has a direct connection to the Internet (such as through a modem), then all computers on the network are exposed to a possible "back door" attack by attackers using the direct Internet connection to gain unauthorized access to the LAN, bypassing the security policy implemented through the "firewall." Extreme forethought and care must be taken when connecting your computers and networks to the Internet or other networks.

There is considerable experience in the Department on achieving a certain level of security when connecting to the Internet. Some organizations in the DOE community recently known to have extensive experience in firewall implementation and administration are Sandia National Laboratory in Albuquerque, Los Alamos National Laboratory, Martin Marietta Energy Systems at Oak Ridge, Pacific Northwest Laboratory, and Westinghouse Savannah River Company. In addition to CIAC, these organizations are ready and willing to share experiences and provide remote advice and assistance to any DOE entity requesting help.

For assistance, contact the Engineering Services Team. We will put you in touch with the right people at an identified "center of excellence." Please address any questions you may have to me on (301) 903-3046, or to Phil Sibert on (301) 903-4880. Remember, questions can also be sent to our team electronically at: **infosecmail@hq.doe.gov**.

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